

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

CLAIMS LISTING (remaining claims are 156-174)

**Claims 1-42:** *(Canceled).*

**Claims 43-155:** *(Canceled).*

**Claim 156 (Currently Amended):** A machine-implemented notifying method which is able to notify responsible parties of notification-worthy events occurring in an automation-assisted medical messaging system, where at least two of the following messaging transactions can take place in the medical messaging system:

- (0.1) a medical service provider orders one or more medical tests to be performed on a given patient where one or more deadlines may be indicated for the performance of the tests and/or for the reporting of corresponding test results to the medical service provider;
- (0.2) an upload source automatically uploads test results and/or other for-provider information into a machine-implemented mailbox, where the mailbox corresponds to a given patient, and where the mailbox is structured to allow a medical service provider to access the uploaded test results and/or other for-provider information of the corresponding mailbox;
- (0.3) the upload source automatically uploads test result changes and/or other informational changes into the machine-implemented mailbox of the given patient;
- (0.4) an expert system automatically analyzes test results and/or other for-provider information, generates a notification urgency value for the analyzed information, where the generated notification urgency value is indicative of whether ~~the~~ a corresponding predefined threshold has been exceeded where the threshold has been established for the analyzed type of test results and/or other for-provider information;
- (0.5) a medical service provider places a message for retrieval by a given patient where the placed message asks the given patient to contact the medical service

provider, and where said requested contacting by the given patient may have a time deadline associated therewith;

- (0.6) a medical service provider is allowed to review uploaded test results and/or other for-provider information uploaded into the machine-implemented mailbox of a given patient;
- (0.7) after review of uploaded test results and/or other for-provider information, a medical service provider is allowed to place and/or approve for placement, corresponding, for-patient information in the mailbox for retrieval by the given patient, where one or more deadlines may be indicated for retrieval by the patient of the placed, for-patient information; and
- (0.8) a patient is allowed to attempt to access a corresponding patient mailbox even if there is no for-patient information placed in that mailbox;

said notifying method comprising:

(a) testing the messaging transactions of the medical messaging system and responsively generating corresponding alerts for retrieval by one or more alertable parties, where the generated and retrievable alerts can be deleted after they are retrieved, where the generated and retrievable alerts are designated as belonging to at least one category in a set of predefined alert categories, where the predefined alert categories include at least two of the following alert categories:

(a.1) a panic alert category indicative of a failure of an alertable party to timely retrieve a placed alert of a lesser urgency than the panic alert being currently generated, where timely retrieval of the less urgent alert is constituted by retrieval of the less urgent alert before expiration of a deadline established for retrieval of the less urgent alert;

(a.2) a patient retrieval alert category indicative of a failure of a patient to timely retrieve a placed, for-patient message before expiration of a deadline established for retrieval of the placed, for-patient message;

(a.3) a missing message alert category indicative of a failure of a responsible party to timely place a for-patient message in a corresponding mailbox before expiration of a deadline established for placing the for-patient message;

(a.4) a test noncompliance alert category indicative of a failure of a corresponding one or more test results to be uploaded into a given mailbox before

expiration of a respective one or more deadlines established for completion of correspondingly ordered tests and for reporting of the corresponding test results;

(a.5) a traced test noncompliance alert category indicative of a failure of a corresponding one or more of plural test results to be uploaded into a given mailbox before expiration of a respective one or more deadlines established for completion of a correspondingly ordered set of plural tests, where the plural tests are pre-designated as belonging to a traced set of tests;

(a.6) a traced test completion alert category indicative of successful and timely uploading of a corresponding one or more of plural test results into a given mailbox before expiration of a respective one or more deadlines established for completion of a correspondingly ordered set of plural tests, where the plural tests are pre-designated as belonging to a traced set of tests;

(a.7) a changed upload alert category indicative of a change of upload information in a given mailbox after a medical service provider has accessed for-provider information that was earlier uploaded into the given mailbox, where change of upload information alters validity of the earlier uploaded information;

(a.8) a test completion alert category indicative of a successful uploading of a corresponding one or more test results into a given mailbox;

(a.9) an upload alert category indicative of for-provider information having been automatically uploaded into a given mailbox where the upload source is indicating via the upload alert, a desire for the medical service provider to be aware of the automatically uploaded, for-provider information;

(a.10) a patient attempt alert category indicative of a patient attempting to retrieve for-patient information from a mailbox that does not contain for-patient information; and

(a.11) a timed upload alert category indicative of for-provider information having been automatically uploaded into a given mailbox where the upload source is indicating via the timed upload alert, a desire for the medical service provider to be aware of the automatically uploaded, for-provider information before expiration of an established deadline;

(b) collecting generated alerts that have not yet been deleted and determining the respective categories into which the collected alerts belong; and

(c) presenting to a medical service provider and/or to another responsible and notifiable party information indicating the category of one or more of the collected alerts.

**Claim 157** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the at least two alert categories include said test completion alert category (a.8).

**Claim 158** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the at least two alert categories include said test noncompliance alert category (a.4).

**Claim 159** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the at least two alert categories include said changed upload alert category (a.7).

**Claim 160** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the at least two alert categories include said patient attempt alert category (a.10).

**Claim 161** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the at least two alert categories include said timed upload alert category (a.11) and where the upload source has determined that the uploaded information deserves the issuance of a panic alert if the timed upload alert is not responded to before expiration of the established deadline.

**Claim 162** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein said predefined alert categories are ordered according to a predefined priority scheme and the step of presenting includes

(c.1) presenting information about alerts in a higher priority one of said at least two alert categories to the medical service provider and/or other responsible and

notifiable party before presenting information about alerts in a lower priority one of said at least two alert categories.

**Claim 163** (*Previously presented*): The machine-implemented notifying method of Claim 162 wherein the at least two alert categories include said panic alert category (a.1) and the panic alert category is ordered as the highest priority one of said predefined alert categories.

**Claim 164** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein said predefined alert categories are ordered according to a predefined priority scheme and the step of presenting includes  
(c.1) presenting information about how many collected alerts are present in a given one or more of said at least two alert categories to the medical service provider and/or other responsible and notifiable party before presenting more detailed information about the alerts of the one or more alert categories.

**Claim 165** (*Previously presented*): The machine-implemented notifying method of Claim 164 wherein said information about how many collected alerts are present in a given one or more of said at least two alert categories is machine-vocalized to the medical service provider and/or other responsible and notifiable party.

**Claim 166** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the predefined alert categories, to which respective ones of the generated and retrievable alerts are designated, include:

(a.12) at least four of said categories (a.1) through (a.11).

**Claim 167** (*Previously presented*): The machine-implemented notifying method of Claim 156 wherein the predefined alert categories, to which respective ones of the generated and retrievable alerts are designated, include:

(a.12) at least eight of said categories (a.1) through (a.11).

**Claim 168 (Currently Amended):** An automated notification system for notifying responsible parties of notification-worthy events occurring in an automation-assisted medical messaging system, where at least two of the following messaging transactions can take place in the medical messaging system:

- (0.1) a medical service provider orders one or more medical tests to be performed on a given patient where one or more deadlines may be indicated for the performance of the tests and/or for the reporting of corresponding test results to the medical service provider;
- (0.2) an upload source automatically uploads test results and/or other for-provider information into a machine-implemented mailbox, where the mailbox corresponds to a given patient, and where the mailbox is structured to allow a medical service provider to access the uploaded test results and/or other for-provider information of the corresponding mailbox;
- (0.3) the upload source automatically uploads test result changes and/or other informational changes into the machine-implemented mailbox of the given patient;
- (0.4) an expert system automatically analyzes test results and/or other for-provider information, generates a notification urgency value for the analyzed information, where the generated notification urgency value is indicative of whether ~~the~~ a corresponding predefined threshold has been exceeded where the threshold has been established for the analyzed type of test results and/or other for-provider information;
- (0.5) a medical service provider places a message for retrieval by a given patient where the placed message asks the given patient to contact the medical service provider, and where said requested contacting by the given patient may have a time deadline associated therewith;
- (0.6) a medical service provider is allowed to review uploaded test results and/or other for-provider information uploaded into the machine-implemented mailbox of a given patient;
- (0.7) after review of uploaded test results and/or other for-provider information, a medical service provider is allowed to place and/or approve for placement, corresponding, for-patient information in the mailbox for retrieval by the given

patient, where one or more deadlines may be indicated for retrieval by the patient of the placed, for-patient information; and

- (0.8) a patient is allowed to attempt to access a corresponding patient mailbox even if there is no for-patient information placed in that mailbox;

said automated notification system comprises:

- (a) one or more alert event detectors which monitor the messaging transactions of the medical messaging system and responsively generate corresponding alerts for retrieval by one or more alertable parties, where the generated and retrievable alerts can be deleted after they are retrieved, where the generated and retrievable alerts are machine designated as belonging to at least one category in a set of predefined alert categories, where the predefined alert categories include at least two of the following alert categories:

- (a.1) a panic alert category indicative of a failure of an alertable party to timely retrieve a placed alert of a lesser urgency than the panic alert being currently generated, where timely retrieval of the less urgent alert is constituted by retrieval of the less urgent alert before expiration of a deadline established for retrieval of the less urgent alert;
- (a.2) a patient retrieval alert category indicative of a failure of a patient to timely retrieve a placed, for-patient message before expiration of a deadline established for retrieval of the placed, for-patient message;
- (a.3) a missing message alert category indicative of a failure of a responsible party to timely place a for-patient message in a corresponding mailbox before expiration of a deadline established for placing the for-patient message;
- (a.4) a test noncompliance alert category indicative of a failure of a corresponding one or more test results to be uploaded into a given mailbox before expiration of a respective one or more deadlines established for completion of correspondingly ordered tests and for reporting of the corresponding test results;
- (a.5) a traced test noncompliance alert category indicative of a failure of a corresponding one or more of plural test results to be uploaded into a given mailbox before expiration of a respective one or more deadlines established for completion of a correspondingly ordered set of plural tests, where the plural tests are pre-designated as belonging to a traced set of tests;

- (a.6) a traced test completion alert category indicative of successful and timely uploading of a corresponding one or more of plural test results into a given mailbox before expiration of a respective one or more deadlines established for completion of a correspondingly ordered set of plural tests, where the plural tests are pre-designated as belonging to a traced set of tests;
- (a.7) a changed upload alert category indicative of a change of upload information in a given mailbox after a medical service provider has accessed for-provider information that was earlier uploaded into the given mailbox, where change of upload information alters validity of the earlier uploaded information;
- (a.8) a test completion alert category indicative of a successful uploading of a corresponding one or more test results into a given mailbox;
- (a.9) an upload alert category indicative of for-provider information having been automatically uploaded into a given mailbox where the upload source is indicating via the upload alert, a desire for the medical service provider to be aware of the automatically uploaded, for-provider information;
- (a.10) a patient attempt alert category indicative of a patient attempting to retrieve for-patient information from a mailbox that does not contain for-patient information; and
- (a.11) a timed upload alert category indicative of for-provider information having been automatically uploaded into a given mailbox where the upload source is indicating via the timed upload alert, a desire for the medical service provider to be aware of the automatically uploaded, for-provider information before expiration of an established deadline;
- (b) an alerts collector which collects generated alerts that have not yet been deleted and identifies the respective categories into which the collected alerts belong; and
- (c) an alerts presenter which can present to a medical service provider and/or to another responsible and notifiable party information indicating the category of one or more of the collected alerts.



**Claim 169** (*Previously presented*): The automated notification system of Claim 168 wherein said predefined alert categories are ordered according to a predefined priority scheme and the alerts presenter includes:

(c.1) a presentation prioritizer which causes presentation of information about alerts in a higher priority one of said at least two alert categories to surpass presentation of information about alerts in a lower priority one of said at least two alert categories.

**Claim 170** (*Previously presented*): The automated notification system of Claim 169 wherein said surpassing of presentation includes at least one of serially presenting the higher priority information before the lower priority information, or listing the higher priority information before the lower priority information.

**Claim 171** (*Previously presented*): The automated notification system of Claim 169 wherein said presentation of information includes indicating how many collected alerts are present in a given one or more of said at least two alert categories.

**Claim 172** (*Previously presented*): The automated notification system of Claim 169 wherein said presentation of information about the alerts includes a machine-vocalized presentation.

**Claim 173** (*Previously presented*): The automated notification system of Claim 168 wherein the predefined alert categories, to which respective ones of the generated and retrievable alerts are designated, include at least eight of said categories (a.1) through (a.11).

**Claim 174 (Previously presented):** A machine-implemented alert forwarding method which is able to alert responsible parties of alert-worthy events occurring in an automation-assisted medical messaging system, wherein operations within the medical messaging system are characterized by:

- (0.1) a medical service provider orders one or more medical tests to be performed on a given one or more patients;
- (0.2) corresponding test results are generated;
- (0.3) a machine-implemented upload source automatically uploads the generated test results and/or corresponding other for-provider information into one or more machine-implemented mailboxes, where each mailbox is structured to allow a medical service provider to access the uploaded test results and/or other for-provider information;
- (0.4) an expert system automatically analyzes the test results and/or other for-provider information and generates an alert flag for the analyzed information if the analyzed information is outside of predefined bounds;
- (0.5) the generated alert flags are logically associated with the uploaded test results and/or other for-provider information uploaded into the machine-implemented mailbox;
- (0.6) the generated alert flags are assigned deadlines by which review is to occur of their corresponding uploaded test results and/or other uploaded for-provider information;
- (0.7) a medical service provider is allowed to review uploaded test results and/or other for-provider information uploaded into the machine-implemented mailbox;
- (0.8) one or more, supplementally notifiable persons are designated;
- (0.9) the medical service provider and/or the one or more, supplementally notifiable persons can be presented with respective alert indicators corresponding to said, generated alert flags, if any;
- (0.10) inhibiting deletion of the associated alert flag, if any, of uploaded test results and/or other uploaded for-provider information until the corresponding uploaded information is reviewed;

said alert forwarding method comprising:

- (a) automatically finding undeleted alert flags and determining if review by a responsible medical service provider has taken place for the associated uploaded test results and/or other uploaded for-provider information; and
- (b) if the assigned deadline of the corresponding and not-yet-deleted alert flag has passed and if it is automatically determined that a responsible medical service provider has not yet reviewed the logically-associated, uploaded test results and/or other uploaded for-provider information, then automatically forwarding a corresponding notification alert signal to at least one of said supplementally notifiable persons where the notification alert signal identifies the uploaded information that has not yet been reviewed.

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